

**Strategic BioSolutions
Cumberland County
Windham, Maine
A-124-71-D-A**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Strategic BioSolutions of Windham, Maine was issued Air Emission License A-124-71-C-R on August 8, 2002, permitting the operation of emission sources associated with their Class IV-A (veterinary) incinerator.
2. Strategic BioSolutions has requested an amendment to their license in order to replace the existing propane fired incinerator with a new oil-fired unit.

B. Equipment to be Licensed

The new incinerator has the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Feed Rate	900 lb
Max. Design Combustion Rate	75 lb/hr
Auxiliary Fuel Input:	#2 fuel oil
Primary Chamber (Btu/hr)	315,000 Btu/hr
Secondary Chamber (Btu/hr)	189,000 Btu/hr
Emission Control	Afterburner

The incinerator combustion gases vent to a 16.75-foot AGL (Above Ground Level) stack, with a diameter of 8 inches.

C. Application Classification

This amendment will not increase emissions of any pollutant by more than 4 tons/year of a single pollutant, nor will it increase total pollutants by more than 8 tons/year. Therefore, this modification is determined to be a minor revision and has been processed as such.

II. BEST PRACTICAL TREATMENT

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT) , as defined in Chapter 100 of the Air Regulations.

BPT for existing equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Veterinary Incinerator

BACT for the Class IV-A (veterinary) incinerator includes the following:

1. The incinerator shall fire #2 fuel oil with a maximum sulfur content not to exceed 0.35% by weight.
2. Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600⁰F with a stack gas retention time, at or above 1600⁰F, of at least 0.75 second.
3. To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer measures a minimum of 1600⁰F prior to commencing the burn cycle.
4. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner, and as specified by the manufacturer, for the period of time between preheat and reaching the set operational temperature of a minimum of 1600⁰F in the secondary chamber.
5. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600⁰F for the duration of the burn cycle.

6. A pyrometer and ¼ inch test port shall be installed prior to incinerator operation and maintained at the location of the incinerator or refractory lined stack, which provides sufficient volume to insure a flue gas retention time of not less than 0.75 second at a minimum of 1600⁰F.
7. A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of waste charged may be logged on the chart.
8. A minimum particulate emission rate of 0.12 gr/dscf corrected to 12% CO₂ will be met.
9. Visible emissions from the incinerator shall not exceed 10% opacity based on a 6- minute block average basis.
10. The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.
11. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Annual Emissions

Strategic BioSolutions shall be restricted to the following annual emissions, based on continuous operation of the new incinerator, and 500 hours per year operation of each previously-licensed emergency generator, on a 12-month rolling total:

Total Licensed Annual Emission for the Facility
Tons/year

(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Generator #1	0.01	0.01	0.01	0.50	0.60	0.02
Generator #2	0.01	0.01	0.01	0.41	0.50	0.02
Incinerator	0.66	0.66	0.36	0.59	0.49	0.05
Total TPY	0.68	0.68	0.38	1.50	1.59	0.09

III. AIR QUALITY ANALYSIS

According to Chapter 115 of the Maine Bureau of Air Quality Regulations, the level of air quality analysis and monitoring are determined on a case-by-case basis. Based on analysis for similar sources, the size of the source, the allowable emissions, the location, and the stack height, ambient air quality standards, including increments, are not expected to be violated. Therefore, an ambient air impact analysis will not be required for this source at this time.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this above source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-124-71-D-A subject to the conditions found in Air Emission License A-124-71-C-R and in the following conditions:

The following replaces Condition (16) of Air Emission License A-124-71-C-R:

- (16) Incinerator
- (i) The incinerator shall be used for the disposal of type 4 (veterinary) waste and shall not be used for the disposal of plastics (other than the bag containing the animal), cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in Maine Air Regulations Chapter 100. [MEDEP Chapter 115, BACT]
 - (ii) The incinerator shall not exceed the maximum design charging rate of 900 lbs. Auxiliary fuel input to the primary and secondary chamber shall be #2 fuel oil with a maximum sulfur content not to exceed 0.35% by weight. Compliance shall be demonstrated through fuel use receipts showing the sulfur content of the fuel. [MEDEP Chapter 115, BACT]
 - (iii) A log shall be maintained recording the weight of waste charged, preheating time, charging time and afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of waste charged may be logged on the chart. [MEDEP Chapter 115, BACT]

- (iv) The secondary chamber shall be preheated as specified by the manufacturer to a minimum of 1600⁰F prior to combusting any waste and shall be maintained at a minimum of 1600⁰F during the duration of the burn. [MEDEP Chapter 115, BACT]
- (v) Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature of a minimum of 1600⁰F in the secondary chamber. [MEDEP Chapter 115, BACT]
- (vi) A pyrometer and ¼ inch test port shall be operated and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 0.75 seconds at the minimum of 1600⁰F. [MEDEP Chapter 115, BACT]
- (vii) Strategic BioSolutions shall not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO₂ from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerator, emissions shall be limited to the following:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.12	0.15
PM ₁₀	--	0.15
SO ₂	--	0.08
NO _x	--	0.14
CO	--	0.11
VOC	--	0.02

[MEDEP Chapter 115, BACT]

- (viii) Visible emissions from the incinerator shall not exceed an opacity limit of 10% based on a 6-minute block average basis. [MEDEP Chapter 115]
- (ix) The incinerator combustion gases shall vent to a stack of at least 16.75 feet AGL. [MEDEP Chapter 115]
- (x) The ash shall be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management. [MEDEP Chapter 115, BACT]

- (xi) The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator. [MEDEP Chapter 115, BACT]
- (xii) Though it is not being required now, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational. [MEDEP Chapter 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-124-71-C-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 31, 2004

Date of application acceptance: March 31, 2004

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.